

Slide 1



# **SRP Load Profiling Presentation**

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**Arizona Corporation Commission**  
- Unbundled Services & Standard Offer Working Group  
- Metering & Meter Reading Committee

**May 18, 1998**

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## Today's Presentation

- **Background**
- **EPRI Study**
  - ◆ **Key Findings**
  - ◆ **Load Profiling Method Performance**
    - Description of Method
    - Simulations & relative performance
    - Comparative results
  - ◆ **Interval Metering Cut-Off Levels**
- **SRP Study**

5/8/98 ACC Profiling-2

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## **Disclaimer**

- **The presentation today relates specifically to SRP's system and data.**
- **SRP does not warrant conclusions drawn from this data as being applicable to other situations.**
- **Specific research would be required to ascertain whether the methods described would yield similar results for other entities.**

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**Issue**

**How can Settlements which need to be priced hourly be performed for retail customers who are NOT metered on an hourly basis?**

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**Potential Answer:**

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**Load Profiling**

**Definition of Load Profiling:**

Using average load shapes (profiles) to estimate usage of customers without metering of the required sophistication.

**Ultimate Example:**

Unmetered accounts

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## History - SRP Study

- 14 mos. ago - SRP group formed to consider deregulation issues, including profiling
- 9 mos. ago - Smaller group set out to test deregulation issues as feasible

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## History - EPRI Study

- **SRP was a participant in an EPRI base study to test load profiling methods**
- **SRP Decided to contract with EPRI separately for a supplement to the base study**
  - ◆ **Compare an SRP developed load profiling method to the others in the base study**
  - ◆ **Examine the question of cut-off levels for requiring interval metering**

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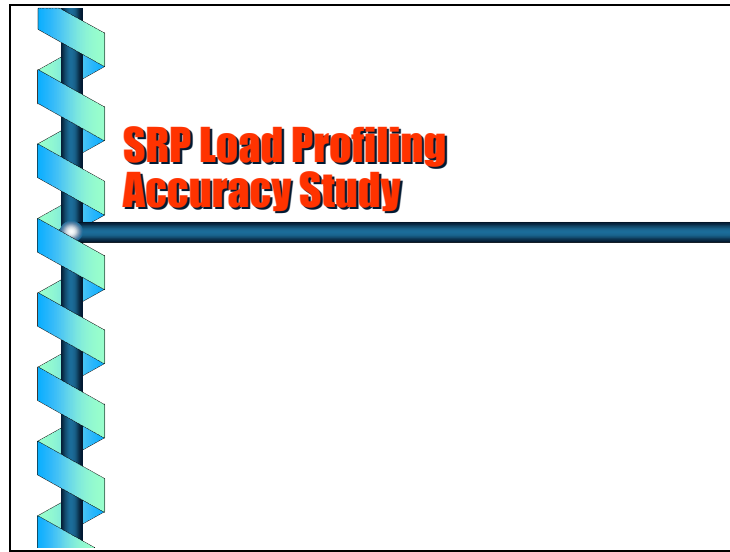
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Slide 8



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## Tested

- **Multiplier Method**
- **Like Day Method**  
Also sometimes called Proxy Day Method
- **Multiplier Method less 500MW**
  - ◆ Same as Multiplier Method with 500MW of base load removed from calculated relationships.

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## **Multiplier & Modified Multiplier Methods**

- Establishes a class load shape from the class's historical relationship to the Control Area load shape
- Segmentation by existing rate class
- Multiplier Curve for each month and by day type (i.e. weekday or weekend) within the month

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## Creating the Multiplier Curve (The Reader s Digest Version)

- **Derivation from historical data:**  
**Multiplier Curve = Class Load / Control Area Load**
- **Use when Control Area Load is known:**  
**Class Load = (Multiplier Curve) X (Control Area Load)**

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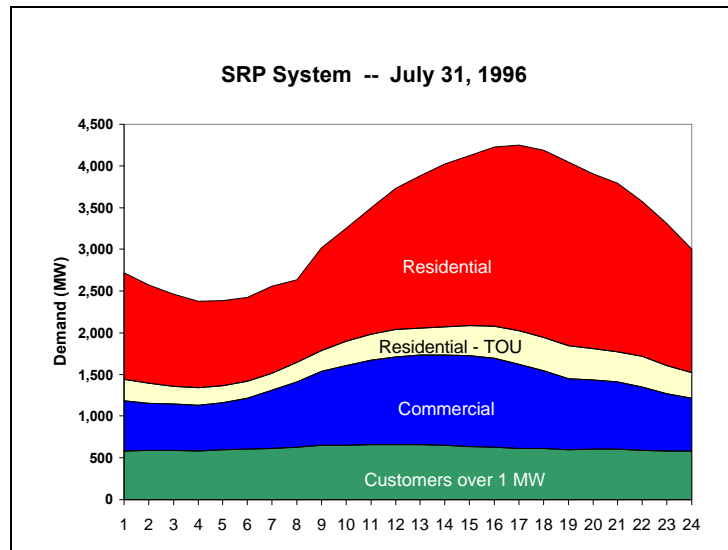
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## Like Day Method

- Establishes the class load shape from a historically similar day s class load shape

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## Testing Methodology

- **Using SRP's existing Load Research Sample for each method tested:**
  - ◆ Profiles created from 1996 data
  - ◆ Profiles used to predict 1997 usage
  - ◆ 1997 profile predicted usage compared to actual hourly metered usage
  - ◆ Hourly energy differences priced at the value of the highest cost SRP resource in use that hour

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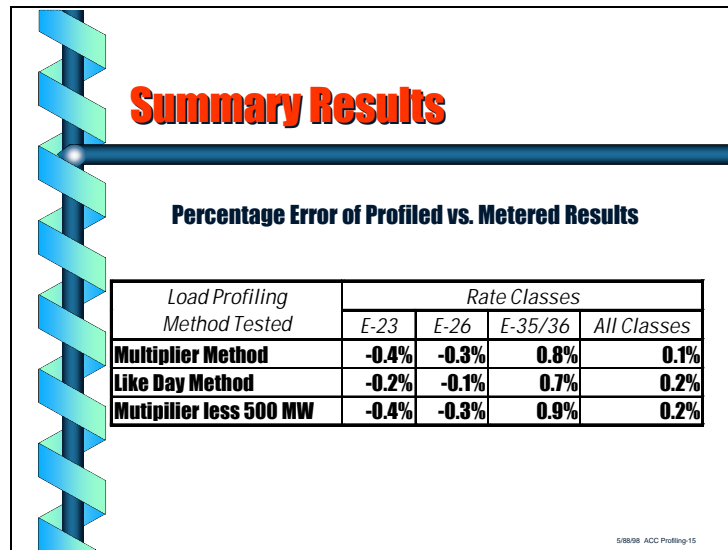
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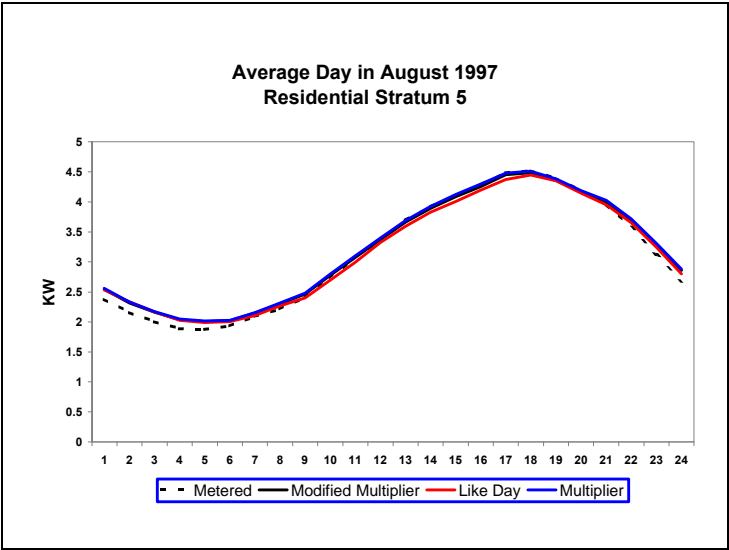
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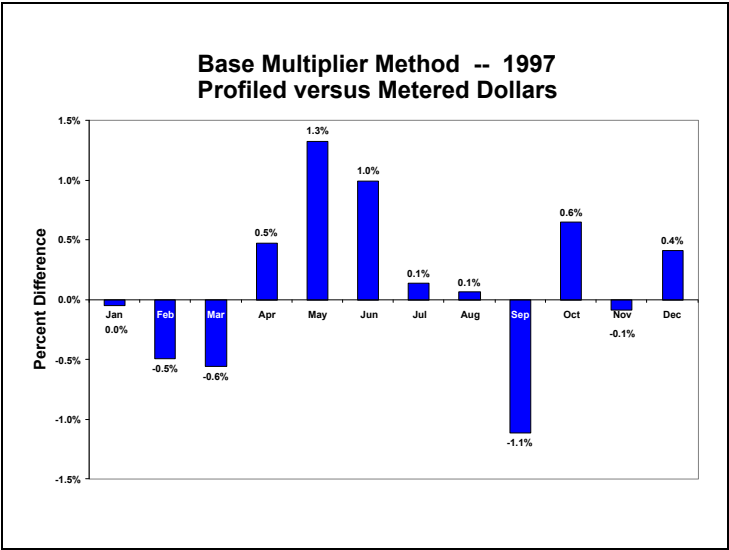
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## **Preliminary Conclusions**

- **Load Profiling appears to be relatively accurate**
- **Partially dynamic load profiling methods may be acceptably accurate**
- **Interval metering cut-off levels may be able to be relatively high if economics is the only consideration**

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